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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,689	10/17/2003	James M. Doherty	1033-T00534C	2688
60533	7590	02/22/2007	EXAMINER	
TOLER SCHAFFER, LLP 8500 BLUFFSTONE COVE SUITE A201 AUSTIN, TX 78759			GERGISO, TECHANE	
			ART UNIT	PAPER NUMBER
			2137	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary****Application No.**

10/605,689

**Applicant(s)**

DOHERTY ET AL.

**Examiner**

Techane J. Gergiso

T-G

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>January 03, 2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This a non-final Office Action in response to the application filed on January 03, 2006.
2. Claims 1-24 have been examined.
3. Claims 1-24 are pending.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 10 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Moran (US Pat. No.: 6, 647, 400)

As per claim 1:

Moran discloses an method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, said method as implemented in said host comprising the steps of:

- (a). monitoring said data entities via comparing a locally stored copy of a digital signature associated with each data entity against a corresponding digital signature stored in a first remote database (column 4: lines 1-15; figure 9: compute signature of a file;

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Does signature match the previously computed signature for file; Abstract; column 4: lines 17-23; column 32: lines 49-59); and

(b). upon identifying a mismatch in compared digital signatures, issuing an instruction to record an entry in a log file located in a second remote database, said entry identifying a possible intrusion in said host (column 32: lines 6-22; column 32: lines 49-59; column 33: lines 36-41).

As per claim 10:

Moran discloses a system to detect intrusion comprising:

- a. a host running a monitoring daemon working in conjunction with a configuration file, said configuration file identifying files and directories to be monitored in said host and said host communicating with external networks via one or more network interfaces, said monitoring daemon dynamically monitoring said files and directories identified by said configuration file by comparing a locally stored digital signature corresponding to each file or directory against a remotely stored corresponding digital signature (column 4: lines 1-15; figure 9: compute signature of a file; Does signature match the previously computed signature for file);
- b. a digital signature database remote from said host storing said digital signatures associated with files and directories identified by said configuration file (Abstract; column 4: lines 17-23; column 32: lines 49-59); and
- c. a log database remote from said host recording entries corresponding to mismatches between a digital signature stored in said host and a corresponding digital

signature in said digital signature database (column 32: lines 6-22; column 32: lines 49-59; column 33: lines 36-41).

As per claim 15:

Moran discloses an article of manufacture comprising a computer usable medium having computer readable program code embed therein to detect intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, said medium comprising:

- a. computer readable program code monitoring said data entities via comparing a locally stored copy of a digital signature associated with each data entity against a corresponding digital signature stored in a first remote database (column 4: lines 1-15; figure 9: compute signature of a file; Does signature match the previously computed signature for file; Abstract; column 4: lines 17-23; column 32: lines 49-59);
- b. upon identifying a mismatch in compared digital signatures, computer readable program code issuing an instruction to record an entry in a log file located in a second remote database, said entry identifying a possible intrusion in said host (column 32: lines 6-22; column 32: lines 49-59; column 33: lines 36-41).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

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art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-9, 11-14 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moran (US Pat. No.: 6, 647, 400) in view of Trostle (US Pat. No.: 5, 919, 257).

As per claim 2:

Moran does not explicitly disclose a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said host communicates with said first and second remote databases via one or more network interfaces and, subsequent to step (b), said method further comprises the step of issuing a command to bring down said one or more network interfaces to isolate said host. Trostle, in analogous art, however, discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said host communicates with said first and second remote databases via one or more network interfaces and, subsequent to step (b), said method further comprises the step of issuing a command to bring down said one or more network interfaces to isolate said host (figure 4: 78-96; figure 5: 100; column 6: lines 30-42).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system disclosed by Moran to include a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said host communicates with said first and second remote databases via one or more network interfaces and, subsequent to step (b), said method further comprises the step of issuing a command to bring down said one or

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more network interfaces to isolate said host. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to provide a trusted technique for detecting illicit changes to executable programs (e.g., a "Trojan horse" appended to an executable program by a computer hacker) as suggested by Trostle in (column 3: lines 19-28).

As per claim 3:

Trostle discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein, subsequent to step (b), said method further comprises the step of issuing a command to an operating system of host to bring said host to a single user state (figure 4: 78-96; figure 5: 100; column 6: lines 30-42).

As per claim 4:

Trostle discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said first remote database and said second remote database are located on a single server or a plurality of servers belonging to a local area network (column 3: lines; 54-65figure 1: 12).

As per claim 5:

Trostle discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein

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communications between said host and first remote database are encrypted (column 5: lines 50-63; figure 5: 88).

As per claim 6:

Trostle discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein communications between said host and second remote database are encrypted (column 5: lines 50-63; figure 5: 88).

As per claim 7:

Moran discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said digital signature is an MD5 signature and said first remote database is an MD5 database (column 31: lines 46-55).

As per claim 8:

Moran discloses a method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said second remote database is a SYSLOG database (column 24: lines 47-64).

As per claim 9:



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Moran discloses an method for detecting intrusion in a host via a monitoring daemon operating in conjunction with a configuration file defining data entities to be monitored, wherein said data entities are any of the following: system files, configuration files, or directories (column 4: lines 5-35).

As per claim 11:

Moran discloses a system to detect intrusion, wherein said first remote database and said second remote database are located on a single server or a plurality of servers belonging to a local area network (figure 3: 306, 308, 304).

As per claim 12:

Trostle discloses a system to detect intrusion, wherein communications between said host and said digital signature database are encrypted (column 5: lines 50-63; figure 5: 88).

As per claim 13:

Trostle discloses a system to detect intrusion, wherein communications between said host and log database are encrypted (column 5: lines 50-63; figure 5: 88).

As per claim 14:

Moran discloses a system to detect intrusion, wherein said digital signature is an MD5 signature and said first remote database is an MD5 database (column 31: lines 46-55).

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As per claim 16:

Trostle discloses an article of manufacture, wherein said host communicates with said first and second remote databases via one or more network interfaces and said medium further comprises computer readable program code issuing a command to bring down said one or more network interfaces to isolate said host (figure 4: 78-96; figure 5: 100; column 6: lines 30-42).

As per claim 17:

Trostle discloses an article of manufacture, as per claim 15, wherein said method further comprises the step of issuing a command to an operating system of host to bring said host to a single user state (figure 4: 78-96; figure 5: 100; column 6: lines 30-42).

As per claim 18:

Moran discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, said host having one or more network interfaces to communicate over one or more networks, said method comprising the steps of:

- a. reading a configuration file to identify data entities to be monitored on a host (column 4: lines 1-15);
- b. for each data entity to be monitored, extracting a digital signature from said host (figure 9: compute signature of a file);
- c. for each data entity to be monitored, querying a remote digital signature database via said one or more network interfaces and requesting a digital signature corresponding

to said digital signature extracted from said host (figure 9: Does signature match the previously computed signature for file);

d. for each data entity to be monitored, receiving said corresponding digital signature from said remote digital signature database (figure 3: 308, 306, 304, 312);

e. matching digital signature received from said remote digital signature database with digital signature extracted at said host (Abstract; column 4: lines 17-23; column 32: lines 49-59);

f. upon identifying a mismatch, transmitting an instruction to a remote log database via said one or more network interfaces, said instruction executed in said remote log database to record an entry in a log file indicating a possible intrusion in said host (column 32: lines 6-22; column 32: lines 49-59; column 33: lines 36-41).

Moran does not explicitly disclose performing any one of, or a combination of, the following steps issuing a command to bring down said one or more network interfaces to isolate said host; or issuing a command to an operating system of host to bring said host to a single user state. Trostle, in analogous art, however, discloses performing any one of, or a combination of, the following steps issuing a command to bring down said one or more network interfaces to isolate said host; or issuing a command to an operating system of host to bring said host to a single user state (figure 4: 78-96; figure 5: 100; column 6: lines 30-42).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system disclosed by Moran to include performing any one of, or a combination of, the following steps issuing a command to bring down said one or

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more network interfaces to isolate said host; or issuing a command to an operating system of host to bring said host to a single user state. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to provide a trusted technique for detecting illicit changes to executable programs (e.g., a "Trojan horse" appended to an executable program by a computer hacker) as suggested by Trostle in (column 3: lines 19-28).

As per claim 19:

Trostle discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, wherein said digital signature database and said log database are located on a single server or a plurality of servers belonging to a local area network (column 3: lines; 54-65 figure 1: 12).

As per claim 20:

Trostle discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, wherein communications between said host and digital signature database are encrypted (column 5: lines 50-63; figure 5: 88).

As per claim 21:

Trostle discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, wherein communications between said host and log database are encrypted (column 5: lines 50-63; figure 5: 88).

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As per claim 22:

Moran discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, wherein said digital signature database is an MD5 database (column 31: lines 46-55).

As per claim 23:

Moran discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, wherein said log database is a SYSLOG database (column 24: lines 47-64).

As per claim 24:

Moran discloses an intrusion detection and isolation method implemented using a monitoring daemon in a host, wherein said data entities are any of the following: system files, configuration files, or directories (column 4: lines 5-35).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See the notice of reference cited in form PTO-892 for additional prior art

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Techane J. Gergiso whose telephone number is (571) 272-3784 and fax number is (571) 273-3784. The examiner can normally be reached on 9:00am - 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T. G.  
Techane Gergiso

Patent Examiner

Art Unit 2137

February 19, 2007

*Matthew D. Smithers*  
**MATTHEW SMITHERS**  
**PRIMARY EXAMINER**  
*Art Unit 2137*